

Comparisons of Job Characteristics

Focus Occupation: [Electrical Engineers \(17-2071\)](#)

Associated Occupation: [Electricians \(47-2111\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 76

Focus Occupation: Electrical Engineers (17-2071)

Associated Occupation: Electricians (47-2111)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mechanical	6.8	16.5	12.9	<<	Extensive education and/or training may be required
Building and Construction	4.0	14.6	8.2	<<	Extensive education and/or training may be required
Mathematics	9.2	14.5	18.1	>>	Current knowledge level is likely more than sufficient
Design	5.2	13.4	21.5	>>	Current knowledge level is likely more than sufficient
Administration and Management	8.4	12.2	11.0	<	Expanded education and/or training may be required
Engineering and Technology	5.7	11.8	22.4	>>	Current knowledge level is likely more than sufficient
Physics	4.3	10.9	15.3	>>	Current knowledge level is likely more than sufficient
Telecommunications	3.9	10.4	7.2	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 23

Focus Occupation: Electrical Engineers (17-2071)

Associated Occupation: Electricians (47-2111)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Troubleshooting	4.5	12.3	8.8	<<	Extensive development of skills in this area may be required

Repairing	3.4	11.6	5.3	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	11.0	7.9	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	10.3	5.5	<<	Extensive development of skills in this area may be required
Installation	1.7	9.4	1.5	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	8.4	4.4	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 58			
Focus Occupation: Electrical Engineers (17-2071) Associated Occupation: Electricians (47-2111)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Visual Color Discrimination	6.4	12.8	7.5	<<	Extensive improvement in abilities may be required
Visualization	7.5	12.2	8.1	<<	Extensive improvement in abilities may be required
Finger Dexterity	7.6	11.8	7.3	<<	Extensive improvement in abilities may be required
Extent Flexibility	4.8	10.4	1.0	<<	Extensive improvement in abilities may be required
Gross Body Equilibrium	3.2	8.2	1.0	<<	Extensive improvement in abilities may be required
Speed of Limb Movement	3.2	6.6	1.0	<<	Extensive improvement in abilities may be required
Glare Sensitivity	2.6	5.9	1.0	<<	Extensive improvement in abilities may be required
Sound Localization	2.2	5.3	1.0	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 48
Focus Occupation: Electrical Engineers (17-2071) Associated Occupation: Electricians (47-2111)		
Work Activities	Exclusivity of Activity	
Conduct training for personnel	30	
Direct and coordinate activities of workers or staff	3	
Perform safety inspections in industrial, manufacturing or repair setting	32	

Prepare reports	8
Read blueprints	10
Read technical drawings	7

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 52

Focus Occupation: Electrical Engineers (17-2071)

Associated Occupation: Electricians (47-2111)

Tools and Technologies	Exclusivity
Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Electrical measuring and testing equipment	7
Indicating and recording instruments	2
Industry specific software	1
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Mechanical instruments	14
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.